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United States  
Department of  
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# Items of Interest in Seed Control

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## Fall 1996

A Procedure for Testing Round-Up™ Ready Soybeans . . . . .	1
Annual Celebration of America's Bounty . . . . .	2
Association of Seed Control Officials of the Northeastern States Meeting . . .	2
Trueness-To-Variety Program News . . . . .	2
Ryegrass Fluorescence List . . . . .	3
International Visitors to the Seed Regulatory and Testing Branch . . . . .	4
Fiscal Year Summary of Seed Regulatory and Testing Branch Activities . . . .	4
Federal Seed Act Cases Settled . . . . .	4
Address Correction Requested . . . . .	5
Suggestions for the Items of Interest in Seed Control . . . . .	5
Additions and Deletions of Plant Variety Protection Certificates . . . . .	6

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## A PROCEDURE FOR TESTING ROUND-UP™ READY SOYBEANS

In the Spring 1996 issue of the Items of Interest in Seed Control we summarized a testing procedure that the Testing Section of the Seed Regulatory and Testing Branch (SRTB) developed to test soybean varieties for resistance to sulfonyleurea herbicides. The SRTB has now developed a preliminary procedure for testing soybeans for resistance to the herbicide Round-Up™.

It is our intent to develop, as time allows, tests that will be of benefit to the readers of this publication. We would like to encourage interested laboratories to try this procedure. Please inform the Testing Section of your questions and your results both good and bad.

### Planting Samples

Moisten germination towels with water as you would for use in a soybean germination test. We found it convenient to use 16 by 12 inch towels (regular weight). Place 2 layers of towels on a flat surface and plant seeds (25 seeds on a 16 inch long towel) in a single line about 2 inches from the top edge of the towels. Cover the seeds with two additional germination towels. Roll the towels as you would for a soybean germination test, being careful that seeds remain in the location they were placed. Four sets of towels are bound together with rubber bands; one just below the line of seeds and the other near the bottom of the towels. Each set of 4 towels is placed upright in an 8 by 14 inch solid plastic bag.

### Growth Conditions

Put the rolled towels in a germinator or growth chamber at 25°C with high light intensity for at least 8 hours a day.

### Preparation of Seedlings

On the fifth day after planting, unroll the towels and fold the top two layers of towels back exposing the germinating seedlings. Remove and discard any dead or abnormal seedlings. Adjust the germinating seedlings as needed so that the tops of the seedlings extend over the top edge of the germination towels. Fold the top two germination towels back over the seedlings, reroll the towels, secure with rubber bands, and replace the rolled towels in plastic bags.

### Herbicide Treatment

Prepare a 400 ppm solution of Round-Up™. Pour a portion of the 400 ppm solution into a graduated cylinder. Insert the tube portion of a pump sprayer (the kind used to spray window cleaner) into the cylinder. Spray the portion of the seedlings extending above the top of the rolled towels until they are saturated. Record the decrease in the level of herbicide in the graduated cylinder after spraying the seedlings in a set of rolled towels. Spray the same amount of herbicide on the seedlings in each succeeding set of towels. We found that 50 ml of solution would saturate 400 seedlings. Spraying should be done in an area away from the germination test area to avoid herbicide injury to other test samples.

### Evaluation

The seedlings can be evaluated 8 days after planting (3 days after spraying with herbicide). Resistant seedlings have epicotyls that appear normal with green, expanded primary leaves. Susceptible seedlings have epicotyls that may appear somewhat stunted and yellow-green in color with yellow-green primary leaves.



## **ANNUAL CELEBRATION OF AMERICA'S BOUNTY**

The SRTB had an exhibit at the Annual Celebration of America's Bounty, held September 20-23, 1996, at the Claude Moore Colonial Farm, McLean, VA. September 20 was set aside for school field trips; the SRTB provided teachers with a germination lesson for their students to perform back in the classroom. More than 375 elementary students, representing 16 classes from 7 selected schools, toured the exhibits. The weekend was open to the public and several hundred visitors per day came by the SRTB exhibit to find out more about seed quality tests such as purity, germination, variety, and noxious-weed seeds. Altogether, there were more than 5000 visitors to the Bounty Celebration. There were also many other agricultural displays and demonstrations by agricultural trade associations, corporations, and other USDA agencies. The following SRTB staff members were on hand to greet visitors and answer their questions: Assistant Branch Chief Richard Payne; Botanists Jim Schoen, Philena Heckert, and Susan Maxon; and Seed Marketing Specialist Steve Hurst. This is the second year that SRTB has been invited to participate in the Bounty Celebration.

## **ASSOCIATION OF SEED CONTROL OFFICIALS OF THE NORTHEASTERN STATES MEETING**

Pennsylvania Seed Division Chief and Association of Seed Control Officials of the Northeastern States (ASCONES) President Joe Garvey submitted the following meeting report:

Representatives of seven ASCONES member States met in conjunction with the Atlantic Seedsmen's Association meeting on October 16 and 17, 1996, in Newport, RI.

The future of ASCONES was the major issue discussed. The members feel that it is very important to keep the organization functioning as their primary voice on seed control issues. The membership recommended that a presentation on ASCONES' concerns and the members inability to travel to meetings and be active in ASCONES and the Association of Seed Control Officials (AASCO) be given to the AASCO membership at AASCO's annual meeting in Lexington, KY, in July 1997.

Other topics on the agenda included a presentation by Joyce Cochran on West Virginia's new computer system. Malcolm Sarna, MD, gave an update on the Seed Health Initiative and on proper labeling formats for brands, blends, and mixtures.

## **TRUENESS-TO-VARIETY PROGRAM NEWS**

We are winding up summer trueness-to-variety trials of all crops. Reports on the apparent mislabelings we found will be sent to seed control officials shortly. In addition, we just transplanted 200 plots of tall fescues and a few red fescues to the field at nearby Upper Marlboro, MD. Florida trials of carrot and radish should be underway soon.

As for next year, we have tentative plans to test the following crops:

- cabbage and brussels sprouts at Southern University, Baton Rouge, LA;
- cowpea at Richmond, VA;
- spring small grains at Brookings, SD;
- pumpkin and muskmelon at Giddings, TX;
- winter small grains at Tifton, GA, and Manhattan, KS (these would begin next fall);
- Kentucky bluegrass at Upper Marlboro, MD; and
- a vegetable to be named later at Gainesville, FL (next fall).

We will finalize plans in the coming months and send requests for samples early in 1997.



## RYEGRASS FLUORESCENCE LIST

This is the ryegrass fluorescence list as updated on September 25, 1996, by the National Grass Variety Review Board. Please note that there have been several additions to the list. Also, the experimental name 89-666 was changed to the variety name Breeze and the experimental name SS-33-DS was changed to the variety name Statesman II.

Perennial Ryegrass <u>Variety Name</u>	Percent Varietal <u>Fluorescence</u>	Perennial Ryegrass <u>Variety Name</u>	Percent Varietal <u>Fluorescence</u>	Perennial Ryegrass <u>Variety Name</u>	Percent Varietal <u>Fluorescence</u>
2CB	1.97%	Elite	4.84%	Regency	0.99%
89-90	2.15%	Envy	0.22%	Repell	0.33%
90-14 <sup>1</sup>	7.12%	Equal	1.98%	Repell II	1.56%
246	0.27%	Evening Shade	1.17%	Reveille	2.00%
856	0.87%	Excel	1.53%	Riviera	0.58%
Accent	0.56%	Express	1.00%	Riviera II	1.08%
Accolade	4.83%	Fiesta II	1.14%	Rodeo II	2.47%
Accord	4.08%	Gator	0.88%	SR 4100	0.37%
Achiever	0.93%	Gettysburg	2.74%	SR 4200	0.34%
Advent	0.14%	Greenland	1.20%	Seville	0.33%
Affinity	0.77%	Grimalda	2.00%	Sherwood	1.08%
Agresso	2.00%	Imagine	1.31%	Shining Star	0.10%
All Star	0.47%	Koos 90-2 <sup>1</sup>	3.85%	Stallion Select	2.37%
Allaire II	1.15%	Laredo <sup>1</sup>	0.53%	Stardance <sup>1</sup>	1.90%
APM	0.59%	Legacy	0.37%	Statesman	1.27%
Aquarius	0.97%	Lindsay	1.72%	Statesman II	3.10%
Assure	0.72%	Linn	5.00%	Target	3.28%
Bedford	1.40%	Lowgrow	1.31%	Tonga	11.53%
Blackhawk <sup>1</sup>	1.17%	Magic	1.21%	Top Hat	0.77%
Blazer III	1.18%	Manhattan II	0.65%	Topeka	2.34%
Boardwalk	2.72%	Manhattan 3	0.88%	Vantage	2.19%
Breeze	1.57%	Morningstar	0.87%	Wind Star	0.47%
Brightstar	1.79%	Mulligan	1.86%	Wizard	2.57%
Buccaneer	2.01%	Navajo	0.37%	Yorktown III	1.42%
C-21 <sup>1</sup>	6.28%	Newlinn <sup>1</sup>	5.85%		
Caliente	0.74%	NightHawk	1.39%	Annual	Percent
Calypso	1.29%	Nobility	3.26%	Ryegrass	Varietal
Calypso II	0.47%	Nomad	1.03%	<u>Variety Name</u>	<u>Fluorescence</u>
Catalina <sup>1</sup>	3.18%	Nova	1.00%	Florida 80	98.89%
Cathedral	0.85%	Omega 3 <sup>1</sup>	0.73%	Grazer	99.78%
Charisma	2.39%	Omni	0.51%	Gulf	99.02%
Chattam <sup>1</sup>	2.11%	Pageant	2.22%	Jackson	98.80%
Citation III <sup>1</sup>	0.96%	Palmer	1.04%	Marshall	96.00%
Commander	1.02%	Palmer II	1.51%	Rio <sup>1</sup>	98.97%
Cutter	1.65%	Passport	1.06%	Surrey	98.91%
Dancer	0.78%	Patriot II	0.42%	TAM 90	98.45%
Dandy	2.00%	Pegasus <sup>1</sup>	2.41%		
Delaware Dwarf	0.61%	Pennant	0.50%		
Derby Supreme	2.85%	Pleasure	1.42%		
Dillon	4.14%	PR8820	0.79%		
Divine	3.09%	Prelude	1.72%		
Edge	1.73%	Prelude II	2.25%		
Elegance	1.51%	Prizm	0.71%		
Elf	0.75%	Quickstart	0.18%		

<sup>1</sup> Experimental Designation  
and/or Variety



## **INTERNATIONAL VISITORS TO THE SEED REGULATORY AND TESTING BRANCH**

Among the international visitors to the SRTB last year were two delegations from the Peoples' Republic of China, and delegations from Uzbekistan, the Republic of Korea, Albania, Hungary, and India and a combined delegation from Estonia and Latvia. The visitors were interested in seed regulation and seed testing procedures in the United States.

## **FISCAL YEAR SUMMARY OF SEED REGULATORY AND TESTING BRANCH ACTIVITIES**

For fiscal year 1996, October 1, 1995 through September 30, 1996, the SRTB received 532 Federal Seed Act (FSA) complaints. The 532 complaints resulted in 662 FSA cases. During the fiscal year we closed 468 cases with warning letters, closed 59 cases with no action taken against the seed shipper, and closed 125 cases with a total of \$42,500 paid in penalties by seed shippers. Also, 34 cases were held-in-abeyance pending future performance by the shippers involved. At the end of the year, we had closed 686 cases and had 545 cases still pending.

During the same period, the SRTB's Testing Section (the Federal Seed Laboratory) received 1,387 service samples and 2,896 FSA samples. Of the samples received, 2,111 were for trueness-to variety testing and 323 were for check tests.

## **FEDERAL SEED ACT CASES SETTLED**

Listed below are cases settled under the FSA from July 1 through September 31, 1996. All cases were settled administratively. Under the administrative settlement procedure, the SRTB and the firms agreed to settle the cases for the amount specified with the firms neither admitting nor denying the charges:

- Budd Seed, Inc., Winston-Salem, NC, has paid \$4,800 for a case involving 13 shipments of seed. The alleged violations, while not the same for all shipments, were false labeling of purity and germination percentages; mislabeling of noxious-weed seed; and failure to keep required records. Seed regulatory officials in Maryland and Virginia cooperated in the initial sampling and inspection.
- Cashwell and Jones, Inc., Mount Olive, NC, has paid \$900 for a case involving 3 shipments of seed. The alleged violations, while not the same for all shipments, were false germination and noxious-weed seed labeling. Seed regulatory officials in Alabama and Virginia cooperated in the initial sampling and inspection.
- NK Lawn and Garden, Chattanooga, TN, has paid \$800 for a case involving 2 shipments of seed. The alleged violations, for both shipments, were failure to properly label seed germinating "less-than-standard" and failure to test seeds for germination within the prescribed time for such testing. Seed regulatory officials in Maryland and Texas cooperated in the initial sampling and inspection.
- NSEW Corporation (doing business as Bailey Feed Mill), Selma, NC, has paid \$400 for a case involving 2 shipments of seed. The alleged violation for both shipments was failure to label the presence of noxious-weed seeds. Seed regulatory officials in Alabama and Florida cooperated in the initial sampling and inspection.



- Sheldon Seed Company, Sheldon, MO, has paid \$600 for a case involving 3 shipments of seed. The alleged violations, while not the same for all shipments, were false pure seed and noxious-weed seed labeling and failure to label required information for a seed component. Seed regulatory officials in Kentucky, Maryland, and West Virginia cooperated in the initial sampling and inspection.
- Valley Seed Company, Casa Grande, AZ, has paid \$400 for a case involving 2 shipments of seed. The alleged violations, while not the same for both shipments, were false purity labeling and failure to label the presence of a seed component. Seed regulatory officials in Tennessee and Texas cooperated in the initial sampling and inspection.

#### **ADDRESS CORRECTION REQUESTED**

If there is an error in your name, title, organization, or address on this or any other mail you receive from us, please send the correction and tell us on what correspondence the mistake was made. If you no longer wish to be on a mailing list, let us know that too.

Seed control officials: Please inform us when higher level personnel (i.e., Secretaries, Commissioners, Directors, etc.) changes are made, including address and title changes, so we can promptly update our records and mailing lists.

#### **SUGGESTIONS FOR THE ITEMS OF INTEREST IN SEED CONTROL**

We welcome ideas or articles you feel should be included in this publication. If you wish to submit an article, please send it to:

Don Dreyer  
 Attention: Items of Interest in Seed Control  
 Seed Regulatory and Testing Branch  
 Livestock and Seed Division, AMS, USDA  
 Room 209, Building 306, BARC-East  
 Beltsville, Maryland 20705-2325







Additions and Deletions  
of  
Plant Variety Protection  
Certificates







PLANT VARIETY PROTECTION CERTIFICATES

**Issued** August 6, 1996, through October 15, 1996)

KIND VARIETY	APPLICANT	TITLE 5 (NO. OF 1994 GEN.) PVPA	KIND VARIETY	APPLICANT	TITLE 5 (NO. OF 1994 GEN.) PVPA
BERMUDAGRASS Cheyenne	Jacklin Seed Company	Y	SOYBEAN	Agricultural Experiment Station	Y
BLUEGRASS, ROUGH Darkhorse	Pickseed West Inc.	Y	CX173	DEKALB Genetics Corporation	Y
BROCCOLI RAAB D'Arrigo 130	D'Arrigo Brothers Company of California	Y	CX360	DEKALB Genetics Corporation	Y
D'Arrigo 63	D'Arrigo Brothers Company of California	Y	CX499c	DEKALB Genetics Corporation	Y
CLOVER, WHITE Mineooha	Tohoku National Agricultural Experiment Station, Ministry of Agriculture, Forestry and Fisheries	Y (1)	FFR 583 S00-66 S12-49 S29-18	FFR Cooperative Northrup King Co. Northrup King Co. Northrup King Co.	Y Y Y Y
CORN, FIELD PHAG6	Pioneer Hi-Bred International, Inc.	Y			
PHAJO	Pioneer Hi-Bred International, Inc.	Y			
PHAP1	Pioneer Hi-Bred International, Inc.	Y			
PHAP8	Pioneer Hi-Bred International, Inc.	Y			
PHAP9	Pioneer Hi-Bred International, Inc.	Y			
PHBE2	Pioneer Hi-Bred International, Inc.	Y			
PHBFO	Pioneer Hi-Bred International, Inc.	Y			
CORN, POPCORN Laser	Larry and Lucyle Eckler				
COTTON NucOTN 35B	Delta and Pine Land Company	Y			
FESCUE, TALL Austin	Normarc, Inc.				
Phoenix	Normarc, Inc.				
MILKVETCH Windsor	USDA-ARS, Colorado Agricultural Experiment Station, and Wyoming	Y (2)			

(\*) No limit to the number of generations of certified seed beyond breeders seed.



PLANT VARIETY PROTECTION CERTIFICATES

**Expired** August 6, 1996, through October 15, 1996)

TITLE 5  
(NO. OF 1994  
GEN.) PVPA

KIND VARIETY	APPLICANT	TITLE 5 (NO. OF 1994 GEN.) PVPA	KIND VARIETY	APPLICANT
ALFALFA Baker	Nebraska Agricultural Experiment Station and USDA-ARS	Y (2)		
FESCUE, CHEWINGS Menuet	J. Joordens Zaadhandel B.V.	Y (3)		
PUMPKIN Little Boo	Agway, Inc.			
SOYBEAN A2858	Asgrow Seed Company			
WHEAT, COMMON 5466	Seed Research Inc.	Y (3)		

(\*) No limit to the number of generations of certified seed beyond breeders seed.

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